IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Harn-Jing Terng, et al
Serial No. : 09/915,780
Filed : July 26, 2001
Title : DIAGNOSTIC ASSAY OF GENETIC MUTATIONS BY DISCRIMINATING AMPLIFICATION AND HYBRIDIZATION

Art Unit : 1637
Examiner : Joyce Tung

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION BY DR. SHIN-HWAN WANG UNDER 37 C.F.R. 1.132

I, Shin-Hwan Wang, hereby declare that:

1. I am a co-inventor of the subject matter described and claimed in the above-identified application, which relates to a discrimination primer for PCR amplifying a nucleic acid that includes a single nucleotide polymorphism (SNP).

2. In an Office Action dated December 3, 2003, the Examiner raised an "obviousness" rejection over Ugozzoli et al. ("Ugozzoli," GATA, 9(4): 107-112, 1992) in view of two other references. Ugozzoli teaches an extension primer having a 5' "X" portion (TGACGTCCATCGTCTCTGCG-) that is complementary to an immobilized, pre-selected nucleic acid sequence.

3. I or others have synthesized a primer that has (i) the just-described 5' X portion of the Ugozzoli extension primer and (ii) the 3' portion of the R11-1-3mis18 discrimination primer described in Example 1 of this application (SEQ ID NO: 2). This primer (X-3mis18) has the sequence of 5'-TGACGTCCATCGTCTCTGCGGCCATCAGGTA-GTACAGAT-3' ("X" portion of the Ugozzoli extension primer underlined). As a reverse primer, it was coupled with a forward primer HjT-F8a (see Example 1 for sequence)

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

June 3, 2004
Date of Deposit

Deborah R. Vast
Signature

DEBORAH R. VAST
Typed or Printed Name of Person Signing Certificate

to amplify a wild type SNP allele of the BTCD18 gene from wild-type bovine genomic DNA in the same manner descried in Example 2 of the application. The R11-1-3mis18 and HjT-F8a primers were used as a positive control. The results are presented in Figure 1 below.

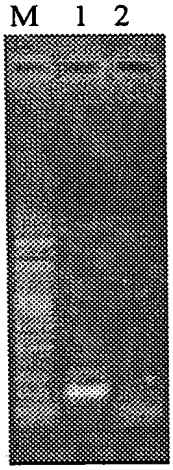

Figure 1. Electrophoresis analysis of bovine BLAD PCR products

Lane 1: forward primer HjT-F8a and reverse primer R11-1-3mis18;
Lane 2 forward primer HjT-F8a and reverse primer X-3mis18.
Lane M: 100bp DNA ladder.

As shown in Figure 1, the PCR reaction having R11-1-3mis18 coupled with HjT-F8a generated specific 222 bp products (Lane 1). In contrast, X-3mis18, coupled with HjT-F8a, failed to generate any specific PCR products (Lane 2).

4. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully Submitted,

Date: May 14, 2004

Shin-Hwan Wang

Shin-Hwan Wang, Ph.D.
2F, No. 3-2, Industry E. 9th Road
Science-Based Industrial Park,
Hsinchu, Taiwan 300, R.O.C.,